15 January 1982

Minutes of Meeting

Subject: Anaconda-Alcan Joint Potlining Disposal/Recovery Study

Date & Place: 12 & 13 January 1982, Tucson, Arizona

Attending: Alcan

Steve Monahan
Wally Robertson
Tampi Verghese
Dan ~~Ben~~ Gnyra

Anaconda

Ted Cambridge
Dave Moran
Walt Simmons
John Snodgrass

Purpose

The purpose of the meeting was to further clarify the working relationship between Alcan and Anaconda and to proceed with the pre-Phase I study on potlining disposal and resource recovery.

Decisions Taken

1. Alcan and Anaconda will evaluate the results of the pre-Phase I study before formally agreeing upon the exact structure of Phase I. Meanwhile, the "Proposal for Joint Study" (Appendix B - Minutes of Montreal Meeting - 8 December 1981) will serve as a guide.

2. The method for potlining processing at the Anaconda Columbia Falls smelter, with an additional treatment system, will be considered the base case for cost comparison. These base case criteria are in Appendix A.

3. The capacity of a plant-specific potlining processing facility is defined to be in the area of five thousand metric tons of potlining per year.

4. Anaconda will provide Alcan with a layout of the Columbia Falls potlining processing facility.

5. The "Kepner-Tregoe" method will be used for process comparisons. A description of this method is in Appendix B.

6. Criteria for the evaluation of potlining processing systems were agreed upon and are listed in Appendix C.

7. Using the "Kepner-Tregoe" method and the criteria listed in Appendix C, the joint evaluation group concluded that three processes have enough potential to justify detailed evaluation and comparison: (1) Mini-L, (2) Anaconda-S, and (3) Alcan-D. A detailed description of this evaluation is in Appendix D.

8. The following was discussed at the meeting and subsequently agreed upon during a phone conversation between Messrs. Snodgrass and Verghese on January 18, 1982.

   Anaconda will provide capital cost estimates for the three processes under evaluation. In addition, Anaconda will perform the operating cost statement for the Anaconda-S process. Alcan will provide operating costs for the "D" and the Mini-L processes.

   Alcan stated that Anaconda's capital cost estimating methods are acceptable for project evaluation requirements, and that a parallel capital cost estimate, performed by Alcan, is not required.

   Alcan will provide Anaconda with equipment flowsheets for the "D" and the Mini-L processes and also a material balance for the Mini-L process. Alcan agrees that Anaconda's material balance for the "D" process is acceptable.

   The Alcan "D" process will be based on a 30,000 MTPY operating plant. The Mini-L and the Anaconda processes will be based on 5,000 MTPY operating plants.

   Operating costs will be presented as units of raw materials, labor, utilities, etc. on a per ton (of potlining) basis. Actual base costs will be determined at the next meeting between Alcan and Anaconda.

9. The joint evaluation group will meet in February to continue the pre-Phase I discussions. The meeting will be in Kingston.

Discussion

The agenda followed is in Appendix E.

Anaconda restated its primary interest to be "the most economical resource recovery process which meets all environmental regulations and requirements and provides recovery of F values in a form suitable for recycle to pots." This statement will be inserted into the minutes of the December 8, 1981 Montreal meeting.

Anaconda's desire is to use the term "disposal" to mean dumping with no treatment, and the term "resource recovery" to mean treatment in any form.

Cost estimate criteria were discussed and documentation exchanged. See Appendix F.

Anaconda has a 1982 budget of $135M for the study of potlining resource recovery. This is equivalent to two supported man-years.

List of Appendices

Appendix A	Base Case Criteria
Appendix B	Kepner-Tregoe Method
Appendix C	Evaluation Criteria
Appendix D	Evaluation Description
Appendix E	Meeting Agenda
Appendix F	Cost Estimate Criteria

Appendix A

Criteria for Base Case

1. Above grade, clay and gravel lined, hazardous waste landfill with leachate collection and treatment facilities.

2. Waste to be covered with clay on a monthly basis.

3. Run-off treatment facility will provide for the acceptable treatment of fluorides and total cyanides. Fluorides will be treated with lime or calcium chloride. Walt Simmons will define the acceptable fluoride emission limit from the facility. Total cyanide treatment will be an oxidation process (ozone preferred). Acceptable CN emission will be .1 ppm.

4. Monitoring wells will be provided.

5. Costs will include landfill closure and post closure monitoring (perhaps up to 20 years).